WHAT IS CLAIMED IS:

1. An image processing apparatus comprising:

a printing signal decomposition unit for receiving an input image signal and decomposing the input image signal into a plurality of color ink signals;

a tincture analysis unit for analyzing a tincture of the input image using the color ink signals, determining dominant priorities of the color ink signals, and outputting ink priority signals;

a texture management unit for assigning texture priorities to a plurality of printing textures in accordance with the ink priority signals; and

a texture assignment unit for assigning the printing textures in descending order of the texture priorities to the color ink signals in descending order of the dominant priorities.

2. An apparatus according to claim 1, wherein

said apparatus further comprises block division means for dividing the input image signal into a plurality of block regions for each page, and

said tincture analysis unit analyzes the tincture of the input image for each divided block.

3. An apparatus according to claim 1, wherein said tincture analysis unit obtains sums of the respective color ink signals contained in the input image, and assigns higher dominant priorities to the color ink signals in descending order of the sums.

4. An apparatus according to claim 1, wherein said tincture analysis unit obtains first sums of the respective color ink signals contained in the input image, obtains second sums calculated by multiplying the first sums by weighting coefficients corresponding to the color ink signals, and assigns higher dominant priorities to the color ink signals in descending order of the second sums.

5. An apparatus according to claim 1, wherein said tincture analysis unit comprises:

a plurality of total pixel value calculation units which are arranged for the respective color ink signals, and receive the corresponding color ink signals contained in the input image signal to obtain total color ink amounts; and

a magnitude comparison unit for comparing the total color ink amounts obtained by said total pixel value calculation units, and outputting the ink priority signals on the basis of a comparison result.

6. An apparatus according to claim 1, wherein said texture management unit sets a texture having the highest priority as a vertical line.

7. An apparatus according to claim 1, wherein said texture management unit comprises a plurality of texture parameter generation units which are arranged for the respective color ink signals, and generate texture parameters of the corresponding color ink signals in accordance with the ink priority signals of the corresponding color ink signals.

8. An apparatus according to claim 7, wherein each texture parameter generation unit comprises:

n (n is an integer of not less than 2) priority texture parameter storage units for storing in advance and outputting image processing parameters for n priorities; and

a selector for selecting any one of the image processing parameters output from said priority texture parameter storage units in accordance with the ink priority signals, and outputting the selected image processing parameter as the texture parameter.

9. An apparatus according to claim 7, wherein said texture assignment unit receives the color ink signals and the texture parameters, performs image processing for the color ink signals using the texture parameters, and assigns the printing textures

in descending order of the texture priories to the color ink signals in descending order of the dominant priorities.

10. An image processing apparatus comprising:

a printing signal decomposition unit for receiving an input image signal and decomposing the input image signal into a plurality of color ink signals;

a frequency analysis unit for analyzing a dominant two-dimensional frequency component of the input image using the color ink signals;

a texture management unit for managing fundamental frequency components of a plurality of printing textures; and

a texture assignment unit for assigning the printing textures to the color ink signals on the basis of the two-dimensional frequency component and the fundamental frequency components of the printing textures.

11. An apparatus according to claim 10, wherein

said apparatus further comprises block division means for dividing the input image signal into a plurality of block regions for each page, and

said frequency analysis unit analyzes the dominant two-dimensional frequency component of the input image for each divided block.

12. An apparatus according to claim 10, wherein said frequency analysis unit sets as the dominant two-dimensional frequency component a component having maximum power except for a DC component in two-dimensional frequency components of the respective color ink signals of the input image.

13. An apparatus according to claim 10, wherein said frequency analysis unit comprises:

a plurality of frequency space conversion units which are arranged for the respective color ink signals, receive the corresponding decomposed color ink signals, and convert the corresponding color ink signals into two-dimensional frequency

space image signals to output the two-dimensional frequency space image signals; and

a plurality of fundamental frequency · angle determination units which are arranged for the respective color ink signals, receive the corresponding two-dimensional frequency space image signals, and obtain two-dimensional frequency components having maximum power except for a DC component to output, as pieces of ink frequency · angle information, the frequencies and angles calculated by ratios of horizontal and vertical components of the frequencies.

14. An apparatus according to claim 13, wherein said texture management unit comprises:

an angle · frequency parameter calculation look-up table which receives the pieces of ink frequency · angle information to output pieces of texture frequency · angle information in correspondence with the respective color ink signals; and

a plurality of texture parameter generation units which are arranged for the respective color ink signals, and receive the pieces of texture frequency · angle information to output ink texture parameters for the corresponding color ink signals.

15. An apparatus according to claim 14, wherein said texture parameter generation unit comprises:

m (m is an integer of not less than 2) texture parameter storage units which are arranged for m textures, and store in advance and output texture parameters for the respective textures; and

a selector which receives the m texture parameters and the texture frequency · angle information to output any one of the ink texture parameters on the basis of the texture frequency · angle information.

16. An image processing method comprising the steps of:

receiving an input image signal and decomposing the input image signal into a plurality of color ink signals;

analyzing a tincture of the input image using the color

ink signals, determining dominant priorities of the color ink signals, and generating ink priority signals;

assigning texture priorities to a plurality of printing textures in accordance with the ink priority signals; and

assigning the printing textures in descending order of the texture priorities to the color ink signals in descending order of the dominant priorities.

17. A method according to claim 16, wherein

the method further comprises the step of dividing the input image signal into a plurality of block regions for each page, and

the step of analyzing the tincture of the input image comprises performing the analysis for each divided block.

18. A method according to claim 16, wherein the step of analyzing the tincture of the input image comprises obtaining sums of the respective color ink signals contained in the input image signal, and assigning higher dominant priorities to the color ink signals in descending order of the sums.

19. A method according to claim 16, wherein the step of analyzing the tincture of the input image comprises obtaining first sums of the respective color ink signals contained in the input image signal, obtaining second sums calculated by multiplying the first sums by weighting coefficients corresponding to the color ink signals, and assigning higher dominant priorities to the color ink signals in descending order of the second sums.

20. A method according to claim 16, wherein the step of analyzing the tincture of the input image comprises:

receiving the corresponding color ink signals contained in the input image signal, and obtaining total color ink amounts; and

comparing the total color ink amounts, and generating the ink priority signals on the basis of a comparison result.

21. A method according to claim 16, wherein the step of assigning the texture priorities comprises setting a texture having the highest priority as a vertical line.

22. A method according to claim 16, wherein the step of assigning the texture priorities comprises generating texture parameters of the corresponding color ink signals in accordance with the ink priority signals of the corresponding color ink signals.

23. A method according to claim 22, wherein the step of generating the texture parameters comprises the steps of:

storing in advance and outputting image processing parameters for n priorities; and

selecting any one of the image processing parameters in accordance with the ink priority signals, and outputting the selected image processing parameter as the texture parameter.

24. A method according to claim 22, wherein the step of assigning the printing textures to the color ink signals comprises receiving the color ink signals and the texture parameters, performing image processing for the color ink signals using the texture parameters, and assigning the printing textures in descending order of the texture priories to the color ink signals in descending order of the dominant priorities.

25. An image processing method comprising the steps of:

receiving an input image signal and decomposing the input image signal into a plurality of color ink signals;

analyzing a dominant two-dimensional frequency component of the input image using the color ink signals;

managing fundamental frequency components of a plurality of printing textures; and

assigning the printing textures to the color ink signals on the basis of the two-dimensional frequency component and the fundamental frequency components of the printing textures.

26. A method according to claim 25, wherein

the method further comprises the step of dividing the input image signal into a plurality of block regions for each page, and

the step of analyzing the two-dimensional frequency component comprises analyzing the dominant two-dimensional frequency component of the input image for each divided block.

27. A method according to claim 25, wherein the step of analyzing the two-dimensional frequency component comprises setting as the dominant two-dimensional frequency component a component having maximum power except for a DC component in two-dimensional frequency components of the respective color ink signals of the input image.

28. A method according to claim 25, wherein the step of analyzing the two-dimensional frequency component comprises the steps of:

receiving the corresponding decomposed color ink signals, and converting the corresponding color ink signals into two-dimensional frequency space image signals to output the two-dimensional frequency space image signals; and

receiving the corresponding two-dimensional frequency space image signals, and obtaining two-dimensional frequency components having maximum power except for a DC component to output, as pieces of ink frequency · angle information, the frequencies and angles calculated by ratios of horizontal and vertical components of the frequencies.

29. A method according to claim 28, wherein the step of managing the fundamental frequency components of the printing textures comprises the steps of:

receiving the pieces of ink frequency · angle information to output pieces of texture frequency · angle information in correspondence with the respective color ink signals; and

receiving the pieces of texture frequency · angle

information to output ink texture parameters for the corresponding color ink signals.

30. A method according to claim 29, wherein the step of generating the texture parameters comprises the steps of:

setting texture parameters for m textures, and storing in advance and outputting the texture parameters for the respective textures; and

receiving the m texture parameters and the texture frequency · angle information to output any one of the ink texture parameters on the basis of the texture frequency · angle information.